Exploring the Perceived Benefits of the Flipped Classroom in a Community College Medical Terminology Course

Jeretta Shoemaker, MSSE Graduate Candidate, Montana State University, Bozeman, MT
Science Educator, Treasure Valley Community College, Ontario, OR

Introduction:

Today's college students seem to be busier than ever, between working, sports, and classes. Additionally, at the community college level, we have a high number of non-traditional students who often have added responsibilities of a family. Many of my students regularly have to miss class due to athletic events, sick children, work responsibilities, etc. This action research project stems from my desire to increase student success under circumstances such as these.

Demographics:

The sample for this study includes eleven self-selected students who registered for this course and agreed to engage in this study. Of these:

- Nine were traditional students (had not taken a break in their education post-high school) and two were non-traditional
- Ten of the eleven students either worked, were student athletes, or cared for family members in addition to their responsibilities as students, with only one student having the freedom to focus exclusively on her education.
- Ten of the eleven students were majors of some area of health care, ranging from pre-matriculation, to EMT, or Medical Assistant. One student simply needed an elective for his transfer degree, and thought the course sounded interesting.
- Nine of the eleven were male, and two were female.

Research Questions:

- In what ways do flipped classroom techniques affect student learning of course content?
- What benefits, if any, do students perceive in the additional time available for group activities, discussion, and interactive learning during class time?
- What is the students' perception of the flexibility provided to them with regards to watching videos and taking follow-up online quizzes?
- In what ways have flipped classroom techniques affected the students' level of enjoyment for learning new material?
- In what ways does this method benefit me as an instructor?

Research Design & Treatment:

- Over the course of four units students were exposed to the traditional and the flipped classroom treatment method alternately (Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Unit 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>4 Days</td>
<td>10 Days</td>
<td>10 Days</td>
<td>10 Days</td>
</tr>
<tr>
<td>Method</td>
<td>Traditional Lecture 1</td>
<td>Flipped Classroom Treatment 1</td>
<td>Traditional Lecture 2</td>
<td>Flipped Classroom Treatment 2</td>
</tr>
</tbody>
</table>

- Surveys were taken throughout the research to gather data regarding student perceptions on personal flexibility of time, class time benefits and overall course enjoyment.
- Formal assessments were administered at the completion of each unit to gather data regarding student learning.
- Small group interviews were completed at the end of the study to provide additional qualitative data and to assist in the triangulation of all assessments.
- A teacher journal was maintained throughout the course of the research to provide reflection in order to analyze the costs/benefits of flipped classroom teaching method.

Data:

- Likert Surveys:

   - "The PowerPoint and lecture videos are very helpful, easily understood, and good study tools."
   - "I enjoyed coming to class. I’ve taken classes where it’s just straight lecture, and it’s like...ugh..."
   - "Let’s me view them [lectures] when I am gone [traveling with the rodeo team]."

Student Quotes:

- "The PowerPoint and lecture videos are very helpful, easily understood, and good study tools."
- "I enjoyed coming to class. I’ve taken classes where it’s just straight lecture, and it’s like...ugh..."
- "Let’s me view them [lectures] when I am gone [traveling with the rodeo team]."

Conclusions:

- Surveys and interviews demonstrated that students perceived a benefit with the treatment method, as compared to the traditional method.
- Class time gained with the incorporation of flipped classroom techniques beneficial for student acquisition of course content.
- Student athletes and non-traditional students had a high level of appreciation for the flexibility gained with the implementation of flip classroom techniques.
- Increased peer interaction and engaging learning activities enhanced overall student enjoyment of the course.
- As an instructor, I enjoyed the increased level of engagement with my students and teaching flexibility this method afforded me.

Acknowledgements:

A special thank you to my MSU committee members, Dr. Walter Woolbaugh, Joseph Bradshaw, and Diana Paterson.

From Treasure Valley Community College, I would like to thank Science Department Chair Arwyn Larson for her countless hours of feedback and mentorship through this journey.

This process would have been impossible without the support of all of these individuals mentioned above, as well as the support of my family.